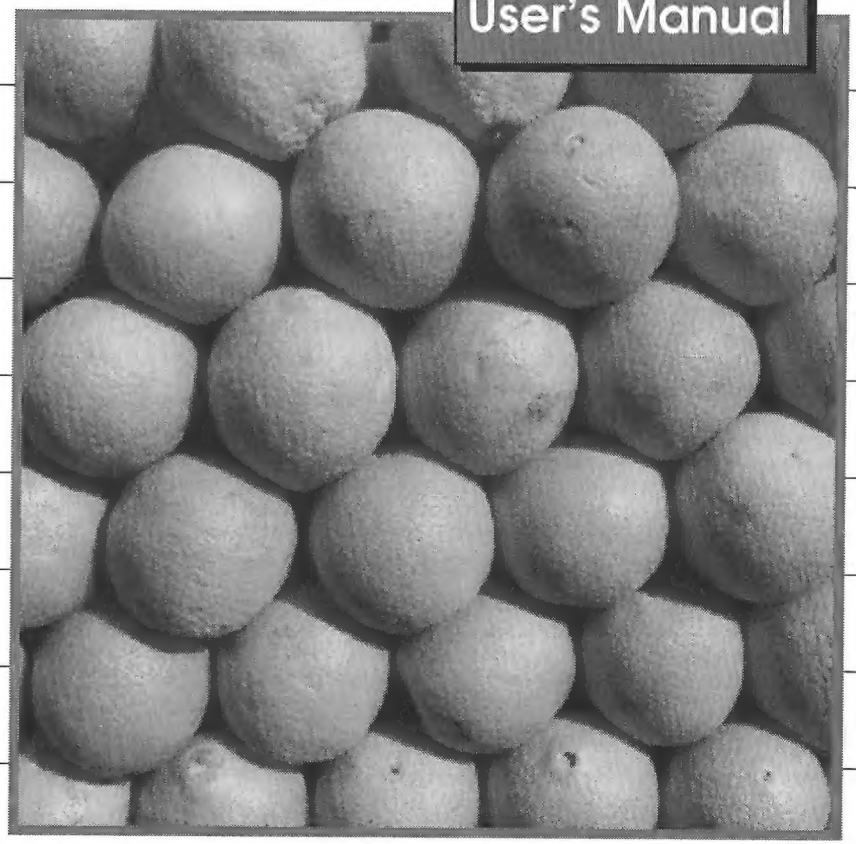
William K. Bradford Educational Software

BRADFORD ARITHMETIC SOFTWARE

Chapter I

User's Manual



William K. Bradford

CHAPTER I

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Bradford Arithmetic Software

Designed and developed by
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Introduction

The Bradford Arithmetic Software has been developed to complement the K-8 mathematics programs. It serves as a supplemental aid to the learning of basic arithmetic concepts and skills.

This program has been an extremely useful tool in the elementary and middle schools. It allows students to reinforce the classroom program, providing supplemental instruction, and an opportunity to practice skills.

Each lesson contains both tutorial and practice segments. Each practice question offers praise for correct answers and corrective help when necessary.

The disk also contains tests that measure the learner's progress in each of the skills addressed in the practice lesson, as well as a comprehensive Diagnostic Check across all skills tested on a disk.

The Computer

The Bradford Arithmetic Software runs on an Apple® II+, IIe, IIc, or IIGS (normal speed setting) computer with 64K of memory, or an IBM PC or compatible micro computer with 128K memory and Color/Graphics Adaptor Card for IBM. Student testing requires two disk drives to record data for use with the management system.

MS-DOS Users: If you are using a version of DOS more recent than 2.0, there may not be sufficient space on the Bradford Arithmetic Software disk for completion of the installation. In this case, boot up from a separate DOS disk. At the prompt, insert the Bradford Arithmetic Software disk, type **GO** or **MENU** and press **ENTER**.

Special Keys

Pressing the **RETURN** key (or the **ENTER** key in MS-DOS) records a user's choice. Prior to that, an answer can be easily changed by pushing the left or right **ARROW** key.

Press the **X** key while holding down the **CONTROL** key to exit from a lesson and return to the menu.

Press the **CONTROL** key and **Q** key to quit the session and return to the title screen.

Press the **CONTROL** key and **O** key to turn the sound on or off.

Press the **CONTROL** key and **J** key to jump over a learning objective. This is available when the objective title page appears on screen.

Press the **CONTROL** key and **P** key to obtain an additional set of Practice items. This option is available only when it appears on the screen, at the end of an exercise set.

MS-DOS users: Press the **CONTROL** key and **E** key to exit the program and return to DOS.

The following is used in some packages:

Press the up and down **ARROW** keys or the **I** and **M** keys to move through a list of words. (These keys are available whenever a learner must make a selection from a list of words.)

To enter an answer in fraction form, the learner should use the following sequence of keypresses:

1) Type the numerator.
2) Press the slash key (/).
3) Type the denominator.
4) Press **RETURN**.

To enter an answer in mixed number form, the learner should use the following sequence of keypresses:

1) Type the whole number.
2) Press the **SPACE BAR**.
3) Type the numerator.
4) Press the slash key (/).
5) Type the denominator.
6) Press **RETURN**.

The Menu

After the title page appears, the user is asked to type his or her first name. The menu will follow and the user is free to choose the lesson he or she wants. Please be advised that the lessons must be studied and mastered in sequence for effective learning. If using MS-DOS, the user may also select the mastery tests from the menu.

The Lessons

The Bradford Arithmetic Software is designed as a supplemental aid to the learning of basic arithmetic concepts and skills.

The lessons may be used to provide supplemental instruction. The tutorial segments can reinforce a classroom presentation and help a learner who has missed a presentation relating to a specific skill. An advanced learner may choose to study new concepts independently.

The lessons also provide the learner with a means for reviewing a wide array of concepts quickly and easily. Learners might want to use the lessons in this way to review prerequisite skills before beginning a new unit of study.

The Tests

After progressing through the lessons, the tests (found on side 2 of the Apple disks), provide a tool for assessing the learner's level of achievement. The first test, the Diagnostic Check, is designed to check for all the competencies adressed by the other tests. Each of the remaining tests is a mastery check designed to determine if the learner is proficient in one specific skill. During all tests, except the Diagnostic Check, a tally is kept at the top of the screen of the number of items answered correctly. Each test will terminate whenever mastery or non-mastery has been determined. Mastery ranges between 75% and 85%, depending upon the individual test. Also, the design of the Diagnostic Check is such that the learner will never need to answer more than 20 questions.

Since every test is constructed by drawing randomly from a large bank of items, learners can select the same test numerous times without repeating the same set of test items.

When a learner demonstrates mastery, a Learning Report will appear on screen. The report will show shaded areas corresponding to the skills that the learner has mastered. In cases where a higher level skill has been mastered, the report will show the prerequisite skills also shaded, assuming that the learner has these mastered as well.

When it is displayed on screen, you may print a copy of the Learning Report. **Apple Users:** pressing the **P** key while holding the **CONTROL** key down will print out a copy of the Learning Report. **MS-DOS Users:** follow the **Print Screen** instructions for your particular computer. A printed copy of a Learning Report shows the name of the learner at the top of the page and uses asterisks to show those skills that have been mastered.

The procedure for recording data from the tests onto the Management System requires two disk drives. Pleare refer to the User's Manual provided with the Management System package for specific instructions.

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